



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,635	04/15/2004	Christophe Souchard	18602-09009 (P3402)	1426
61520	7590	10/16/2008	EXAMINER	
APPLE/FENWICK SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041			COUSO, YON JUNG	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			10/16/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/826,635

**Applicant(s)**

SOUCARD, CHRISTOPHE

**Examiner**

Yon Couso

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 13-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 24 is/are allowed.  
6) ☒ Claim(s) 1-6, 13-20, 25-28 is/are rejected.  
7) ☒ Claim(s) 21-23 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

1. Applicant's arguments filed July 1, 2008 have been fully considered but they are not persuasive.

a. The applicant argues that the finality of next office action is precluded because the examiner has not addressed certain claimed limitations. The applicant noted that the claims 3, 4, 5, 6, 15, 16, 17, 18, 21, 22, 23, and 24 were not addressed in the rejection. The examiner notes that the claims were not rejected based on the art. However, they were all rejected under 35 USC 101 as being non-statutory and they were all cited in the 35 USC 101 rejection.

b. The applicant argues that the claim 1 recites useful, tangible, and concrete results, therefore statutory. The examiner disagrees. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

c. The applicant argues that the Gao does not teach filter tap weight. The examiner disagrees. The filter parameters taught in the Gao inherently teaches filter tap weights.

d. The applicant also argues that the Gao does not teach calculating output pixel values to produce an output image. The applicant states that "Gao, as currently understood, also does not disclose or suggest "calculating output pixel values to produce an output image." At best, paragraphs [0045]-[0056] disclose function  $b_g.\text{hat}(t)$ . See Gao at [0027], [0051]. However, the function  $b_g.\text{hat}(t)$  outputs *boolean values*, not "output pixel values to produce an output image." At best, these outputs are merely

*labels*" for the original image pixels denoted by 1 s and 0s that indicate whether any given pixel is in the background (boolean value = 0) or the foreground (boolean value = 1) for a desired pattern. The examiner notes that producing boolean value = 0 , or 1 still reads on the claimed limitation "calculating output pixel values to produce an output image".

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6, 13-18, 25-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-6, 25 and 26 are drawn to computer-implemented method, without citing the computer in the body of the claim. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claims 13-18, 27, and 28 are drawn to a computer program product. Even though the claims include computer-readable medium, the claim is directed to computer program product. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not

define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

The examiner suggests to amend the claimed language to "A computer-readable medium encoded with a computer program for image resampling comprising: an estimation module---".

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 13, 14, 19, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gao et al (US 2003/0174892).

As to claim 1, Gao teaches a computer-implemented method of image resampling, comprising: estimating input image statistics from input pixel values associated with an input image to be resampled (paragraph 0027); substituting the input image statistics for unknown output image statistics (paragraph 0027); determining an optimum set of filter tap weights (paragraphs 0031-0043); and calculating output pixel values to produce an output image (paragraphs 0045-0056).

As to claim 2, Gao teaches that the image statistics comprise an auto-correlation matrix and a covariance vector (paragraphs 0040 and 0056).

As to claim 13, Gao teaches a computer program product for image resampling, the computer program product comprising: a computer-readable-medium storage medium (paragraph 0030); and computer program code, coded on the computer-readable storage medium comprising: an estimation module configured to estimate input image statistics from input pixel values (paragraph 0027); a software portion configured to substitute the input image statistics for unknown output image statistics (paragraph 0027); a software portion configured to calculate an optimum set of filter tap weights (paragraphs 0031-0043); and a software portion configured to calculate output pixel values (paragraphs 0045-0056).

As to claim 14, Gao teaches that the image statistics comprise an auto-correlation matrix and a covariance vector (paragraphs 0040 and 0056).

As to claim 19, Gao teaches a system for image resampling an image, comprising: a processor (paragraph 0030); means for estimating input image statistics from input pixel values (paragraph 0027); means for substituting the input image statistics for unknown output image statistics (paragraph 0027); means for determining an optimum set of filter tap weights (paragraphs 0031-0043); and means for calculating output pixel values to produce an output image (paragraphs 0045-0056).

As to claim 20, Gao teaches that the image statistics comprise an auto-correlation matrix and a covariance vector (paragraphs 0040 and 0056).

4. Claims 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claim 24 is allowed.
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (571) 272-7448. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 2624

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Yon Couso/

Primary Examiner, Art Unit 2624

October 10, 2008